Use Attainability Analysis

for

WBID 0899 Salt Fork

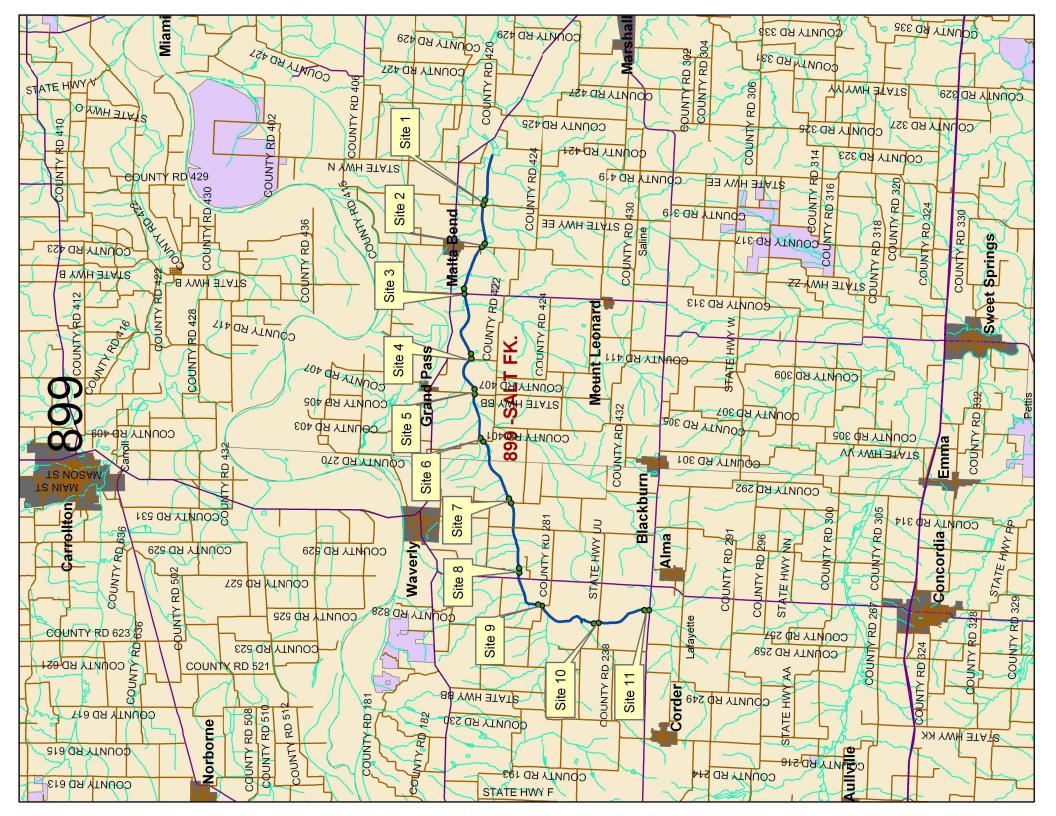
Submitted by SES, Inc.

to Missouri Department of Natural Resources Water Protection Program

Date received: November 14, 2007

Data Sheet A - Water Body Identification

	Body Inforn		(For water b	ody being	surveyed)	
Water Boo	dy Name (fr	om USGS 7.	5' quad):	Salt Fk.			
Missouri V	Vater Body	Identification	(WBID) Num	nber:	899		
8 digit HU	C code:	1030014			County:	Lafayette	
Upstream	Legal Desc	cription (from	Table H):		T50N	R24W	Sec29
Downstrea	am Legal D	escription (fro	om Table H):		T51N	R22W	Sec27
Number o	f sites evalu	uated:	11				
List all site	e numbers,	listed conseq	uently upstre	am to dov	vnstream:		
		11, 10, 9, 8	, 7, 6, 5, 4, 3	, 2, 1			
Cita Lass	tions Man/	a). Attach a	man of the or	tiro oo am	ant with a	aaaaamant d	sites algority labeled
				ilire segm	ent with a	ssessments	sites clearly labeled.
wark any	otner items	that may be	oi interest.				
n =		/P () II					()
		on (list all per		arges to th	ie water bo	ody segmen	t)
Facility Na	ame(s) and	Permit Numb	er(s):				
		age Treatme	nt Lagoon				
	MO00480	97					
		ease print leg					
Name of S	Surveyor:	Gilisa Goule	d		Telephon	e Number:	913.307.0054
0							
Organizati	ion/Employe	er:	SES, Inc.				
DI				-4!			
	-	ou mave com	pieteu ali Se	cuons, c	neckeu al	i applicable	boxes, and that the form is
complete	•						
Signed:	gilisa gou	ıld			Date:	11.01.07	
Jigilea.	91113a got	4.4			- Date.	11.01.01	



WBID#	899
Site #	1

			_				
Date & Time:	10.23.07 16:10)	Site Location	on Descrip	tion (e.g. road	crossing):	
Personnel:	Larissa Brown and Gilisa (Gould		417 Rd.			
Current Weat	her Conditions: clear		Facility Nar	me:	e Treatment Lagoon		
Weather cond	litions for the past 10 days:4	1.65 inches	Permit Nun	nber:	MO0048097		
Drought cond	itions?: No drought ☑ ; Pha	ise I □ ; Phase	· II □ ; Phas	e III □ ; Pł	nase IV □ ; Ur	nknown 🗆	
-	-						
Site Location	1*						
	dinates (Universal Transve	rse Mercator P	rojection, In	Meters			
Site 01	Easting (UTM X):	Northing (UTI	M Y):		Horizontal Ac	curacy: Meters	
	0470663		4336844			7.6	
Site 11	Easting (UTM X):	Northing (UTI	M Y):		Horizontal Ac	curacy: Meters	
	0470907		4336767			8.2	
	0-10001		4000701			U.L	
Photos:		1					
Photo ID#	Photo Purpose	Photo ID#:	Photo Purpose		Photo ID#:	Photo Purpose	
22	downstream, T1	23	upstream, T1		24	downstream, T11	
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose	
25	upstream, T11						
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose	
Uses Observ	ed:						
☐ Swimming	☐ Skin diving	☐ SCUBA d	iving	☐ Tubing	g	☐ Water Skiing	
☐ Wind surfi	ng □ Kayaking	☐ Boating		□ Wadir	ng	☐ Rafting	
☐ Hunting	☐ Trapping	☐ Fishing		☑ None	of the above	☐ Other:	
Describe:							

WBID#	899
Site #	1

	Data Sheet B-	Site Characterization (Continued)			
0						
Surrounding Condition		П MD0			1 7 D1 F	D : : (a) = :::4(= 1
☐ City/County parks	□ playgrounds	☐ MDC conservation		n areas		Residential
☐ Campgrounds	☐ State parks	☐ National Forests	□ Nature		☐ Stairs/	
☐ Boating accesses	☐ Fence	☐ No tresspass sign	☐ Steep	Slopes	☐ Other:	
Comments: none						
Fuldana at Haman I						
Evidence of Human l		I = 5 - 1/ - 1/	15.0	. 0:1		
☐ Roads	☐ Foot path/prints	☐ Dock/platform		ing Sites	☐ Rope s	
☐ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Discharge	∐ Fishin	g Tackle	☐ Livesto	ck watering
comments/other:						
none						
Substrate:						
% Cobble	% Gravel	% Sand %	Silt	0/ Mud/	Clay	% Bedrock
% Copple	% Gravei	% Sanu %	40	% Mud/0 40		% bedrock
	20		40	40		
Aquatic Vegatation:						
Aquatic Vegatation.						
nono						
none						
Water Characteristic	e.					
Odor:	☐ Sewage	☐ Musky ☐	Chemical	1 🔽	Vone	☐ Other:
Color:	☐ Clear		Gray		Milky	☑ Other:
OOIOI.			Citay		viility	brown
Bottom Deposit:	□ Sludge	□ Solids □	Fine sediments	<u></u>	None	☐ Other:
Surface Deposit:	□ Oil		Foam		lone	☐ Other:
ourrace Deposit.		_ 00am			10.10	_ 0

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

	Distance from	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
	access location (m)				
	•	•	•	<u> </u>	
amananta. (D)					
omments: (Please re	cord any additional comments	nere.)			
one					
	ou have completed all s	sections, checke	ed all applicable	boxes, and that the	form is
lease verify that yo	ou have completed all s	sections, checke	ed all applicable	boxes, and that the	form is
	ou have completed all s	sections, checke	ed all applicable	boxes, and that the	form is
	ou have completed all s	sections, checke	ed all applicable	boxes, and that the	form is
omplete.		sections, checke			form is
omplete.		sections, checke	ed all applicable _Date of Survey:		form is
		sections, checke			form is

																		Disso	lved Ox	ygen		
	Waterbo	•					1		i							Date:	10.23.07	7		Time:	16:10	
				'		•		een low b								Di	ssolved	Oxygen:		3.0	(mg/L)	
	01	cation - I UTM X UTM X	:	UTM X) 0470663 0470907	3	1	UTM Y:	izontal Ac	433684	4		PDOP / FO +/- +/-	OM) 7.6 8.2	(meters)	•	Di	ssolved	Oxygen:			(% sat)	
				0170207		•				ength of					(meters)		Specifi	ic Cond:			(µS/cm)	
			ngth of I				0	(meters)		20x avera	-	-		100	(meters)	Wa	ter Tem	perature:		14.8	(°C)	
	Fiel	d Staff:	Larissa	a Brown		and	Gilisa C	ould						-								
										Tra	nsect C	ross-Se	ction									
	0	1	0	2	0	13		04	0)5	0)6	(07	0	8	0	9	10	0	1	1
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.7	0.60	0.7	0.05	0.8	0.30	0.8	0.05	0.9	0.15	0.9	0.15	0.8	0.10	0.6	0.25	1.0	0.55	0.7	0.05	0.9	0.15
2	1.4	0.70	1.4	0.20	1.6	0.70	1.6	0.45	1.8	0.85	1.8	0.65	1.6	0.40	1.2	0.85	2.0	1.00	1.4	0.30	1.8	0.30
3	2.1	1.00	2.1	0.50	2.4	0.65	2.4	1.00	2.7	1.00	2.7	1.00	2.4	0.90	1.8	1.00	3.0	1.00	2.1	0.50	2.7	0.50
4	2.8	1.00	2.8	0.65	3.2	0.15	3.2	1.00	3.6	1.00	3.6	1.00	3.2	1.00	2.4	1.00	4.0	1.00	2.8	0.60	3.6	0.70
5	3.5	0.85	3.5	0.65	4.0	0.40	4.0	1.00	4.5	1.00	4.5	1.00	4.0	1.00	3.0	1.00	5.0	1.00	3.5	0.65	4.5	0.60
6	4.2	0.60	4.2	0.50	4.8	0.60	4.8	1.00	5.4	1.00	5.4	1.00	4.8	0.85	3.6	1.00	6.0	1.00	4.2	0.40	5.4	0.40
7	4.9	0.50	4.9	0.40	5.6	0.75	5.6	1.00	6.3	1.00	6.3	1.00	5.6	0.60	4.2	1.00	7.0	1.00	4.9	0.10	6.3	0.50
8	5.6	0.50	5.6	0.20	6.4	0.55	6.4	0.60	7.2	0.90	7.2	0.60	6.4	0.30	4.8	0.70	8.0	1.00	5.6	0.15	7.2	0.35
9	6.3	0.20	6.3	0.05	7.2	0.25	7.2	0.45	8.1	0.20	8.1	0.25	7.2	0.15	5.4	0.65	9.0	0.60	6.3	0.05	8.1	0.05
aight Bank	7.0	0.00	7.0	0.00	8.0	0.00	8.0	0.00	9.0	0.00	9.0	0.00	8.0	0.00	6.0	0.00	10.0	0.00	7.0	0.00	9.0	0.00
eature Type		-1		-1		1		1		1		1		1		-1		-1		-1		-1
ffle, run, or pool	po	100	po	ool	pc	ool	p	ool	po	ool	pc	ool	р	ool	po	Ol	po	100	po	Ol	po	Ol

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This with is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing weted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

Signed: gilisa gould Date: 11.01.07	
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WBID#	899
Site #	2

Date & Time:	10.23.07 17	:00	Site Location Description (e.g. road crossing):					
Personnel:	Larissa Brown and Gilis	a Gould	CR 415					
Current Weat	her Conditions: clear		Facility Nar	Facility Name: Alma Sewage Treatment Lago				
Weather cond	litions for the past 10 day	/s:4.65 inches	Permit Nun	nber:	MO0048097			
Drought cond	itions?: No drought ☑ ; F	Phase I □ ; Phase	· II □ ; Phas	e III □ ; Pl	hase IV □ ; Uı	nknown 🗆		
Site Location								
	dinates (Universal Trans T			Meters				
Site 01	Easting (UTM X):	Northing (UTN	M Y):		Horizontal Ac	ccuracy:	Meters	
	0468620		4336907				3.0	
Site 11	Easting (UTM X):	Northing (UTN	И Y):		Horizontal Ac	ccuracy:	Meters	
	0468787		4336772				5.5	
Photos:								
Photo ID#	Photo Purpose	Photo ID#:	Photo F	Purpose	Photo ID#:	Photo Purpo	se	
26	downstream, T1	1 27	upstream,	Γ1	28	downstream, T11		
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpo	se	
29	upstream, T11							
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpo	se	
Uses Observ	ed:					,		
☐ Swimming	g □ Skin diving	☐ SCUBA di	iving	☐ Tubin	g	☐ Water Skiing		
☐ Wind surfi	ng □ Kayaking	☐ Boating		□ Wadir	ng	☐ Rafting		
☐ Hunting	□ Trapping	□ Fishing		☑ None	of the above	☐ Other:		
Describe:								

WBID#	899
Site #	2

			,			
Surrounding Condition	ons:					
☐ City/County parks	□ playgrounds	□ MDC conservati	ion lands 🔲 Urba	an areas	☑ Rural Re	sidential
☐ Campgrounds	☐ State parks	□ National Forests	s □ Natur	re trails	☐ Stairs/wa	alkways
☐ Boating accesses	☐ Fence	☐ No tresspass sig	gn □ Steer	Slopes	☐ Other:	<u>-</u>
Comments:			<u> </u>			
none						
Fridance of Human I	Uaa.					
Evidence of Human L			I 🗆 O	- ! O!4		de sa
☐ Roads ☐ RV/ATV Tracks	☐ Foot path/prints	☐ Dock/platform		ping Sites	☐ Rope sw	
	☐ Fire pit/ring	☐ NPDES Discharg	je ∟risiiii	ng Tackle	☐ Livestocl	k watering
comments/other:						
none						
Substrate:						
% Cobble	% Gravel	% Sand	% Silt	% Mud/C	Clay 9	6 Bedrock
	20		40	40	•	
Aquatic Vegatation:						
none						
Water Characteristics	e.					
Odor:	□ Sewage	☐ Musky	☐ Chemical	1 1	None	☐ Other:
Color:	☐ Clear	□Green	☐ Gray			☐ Other:
30101.						prown
Bottom Deposit:	□ Sludge	□ Solids	☐ Fine sediments	<u> </u>		□ Other:
Surface Deposit:	Oil	☐ Scum	□ Foam			☐ Other:

Field Data Sheets for Recreational Use Stream Surveys

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational us	tional uses)
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Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
	access location (III)				
Comments: (Please re	cord any additional comments I	nere.)			
	none				
Please verify that yo complete.	ou have completed all s	ections, check	ed all applicable	boxes, and that the	form is
Surveyor's Signature:	gilisa gould		_Date of Survey:	10.23.07	
Organization	SES, Inc.		Dooition	field team leader	

																		Disso	lved Ox	ygen		
	Waterbo	ody ID:	899			Site #:	2									Date:	10.23.07	7		Time:	17:00	
	Estimate	ed Chanr	nel Incisi	on:	2.0	(m) (he	ight betw	een low b	ank wid	th and wa	ater)					Di	issolved (Oxygen:	•	3.1	(mg/L)	
		cation - I		UTM X) 0468620		-	Y), Hor UTM Y:	izontal Ac	ccuracy l 433690		•	DOP / F0 +/-	OM) 3.0	(meters)			issolved ((% sat)	
		UTM X		0468787							•	+/-	5.5	(meters)	•	2.					(μS/cm)	
		e Stream					8	(meters)	•	ength of	-	_		160	(meters)							
	(To dete	ermne Le	ength of I	Reach)					(2	20x avera	ige streai	m width)				Wa	ater Temp	perature:		13.5	(°C)	
	Fiel	ld Staff:	Lariss	a Brown		and	Gilisa G	ould						-								
							•			Tra	nsect C	ross-Se	ction									
	0)1	0	2	0	3	(04	()5	0	16		07	08	8	0:	9	1	0	1	1
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m
eft Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.6	0.10	0.7	0.10	0.8	0.10	0.8	0.10	0.7	0.20	0.8	0.05	0.8	0.05	0.8	0.05	0.7	0.05	0.7	0.10	0.7	0.10
2	1.2	0.40	1.4	0.35	1.6	0.40	1.6	0.30	1.4	0.65	1.6	0.30	1.6	0.35	1.6	0.20	1.4	0.20	1.4	0.30	1.4	0.40
3	1.8	0.40	2.1	0.50	2.4	0.40	2.4	0.60	2.1	0.85	2.4	0.60	2.4	0.70	2.4	0.45	2.1	0.25	2.1	0.70	2.1	0.60
4	2.4	0.45	2.8	0.60	3.2	0.90	3.2	0.80	2.8	0.90	3.2	0.75	3.2	0.90	3.2	0.95	2.8	0.70	2.8	0.95	2.8	0.85
5	3.0	0.50	3.5	0.55	4.0	1.00	4.0	0.80	3.5	0.80	4.0	0.70	4.0	1.00	4.0	1.00	3.5	0.80	3.5	0.80	3.5	1.00
6	3.6	0.30	4.2	0.45	4.8	1.00	4.8	0.90	4.2	0.45	4.8	0.65	4.8	1.00	4.8	1.00	4.2	0.55	4.2	0.75	4.2	0.95
7	4.2	0.15	4.9	0.45	5.6	0.90	5.6	0.90	4.9	0.30	5.6	0.50	5.6	0.80	5.6	1.00	4.9	0.50	4.9	0.70	4.9	0.50
8	4.8	0.05	5.6	0.30	6.4	0.50	6.4	0.60	5.6	0.20	6.4	0.30	6.4	0.30	6.4	0.40	5.6	0.20	5.6	0.60	5.6	0.30
9	5.4	0.01	6.3	0.05	7.2	0.25	7.2	0.10	6.3	0.05	7.2	0.10	7.2	0.05	7.2	0.10	6.3	0.05	6.3	0.30	6.3	0.05
ight Bank	6.0	0.00	7.0	0.00	8.0	0.00	8.0	0.00	7.0	0.00	8.0	0.00	8.0	0.00	8.0	0.00	7.0	0.00	7.0	0.00	7.0	0.00
eature Type	n	ool	no	vo1	no	vol	n	ool	n	ool	n	ool	,	ool	no	ol	ро	ol.	no	vo1	ро	ol.
ffle, run, or pool	рc	JUI	pc	ool	ρο	ool	pe	UUI	po	ool	рc	JUI	р	UUI	po	UI	ρο	101	po	UI	ρο	UI

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This with is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing weted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

Signed: gilisa gould Date: 11.01.07	
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WBID#	899
Site #	3

Date & Time:	10.23.07	17:40		Site Location	on Descript	tion (e.g. road	crossing):			
Personnel:	Larissa Brow	n and Gilisa G	Gould		Hwy 127					
Current Weat	ner Conditions	s: clear		Facility Nar	Facility Name: Alma Sewage Treatment La					
Weather cond	litions for the p	past 10 days:4	.65 inches	Permit Number: MO 0048097						
Drought cond	tions?: No dro	ought ☑ ; Pha	se I □ ; Phase	Ⅱ 🛘 ; Phas	e III □ ; Pł	nase IV □ ; Ur	nknown 🗆			
Site Location	1:									
		ersal Transver	se Mercator Pr	rojection, In	Meters					
Site 01	Easting (UTN	Л X):	Northing (UTN	И Y):		Horizontal Ac	Meters			
	0466	324		4337790				14.3		
Site 11	Easting (UTN	Л X):	Northing (UTN	И Y):		Horizontal Accuracy: Me				
	0466	580		4337785			·	7.9		
	0700		<u> </u>	4007700				1.5		
Photos:	1		1	1		1	<u> </u>			
Photo ID#	Photo Purpose		Photo ID#:	Photo F	Purpose	Photo ID#:	Photo Pu	ırpose		
30	upstream, T1		31	downstrear	n, T1	32	downstream, T	11		
Photo ID#	Photo	Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Pu	ırpose		
33	upstr	eam, T11								
Photo ID#	Photo	Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose			
Uses Observ	ed:									
☐ Swimming	ı 🗆 S	Skin diving	☐ SCUBA di	iving	☐ Tubing	9	□ Water Skiin	ıg		
☐ Wind surfi	ng □ K	Cayaking	☐ Boating		□ Wadin	ıg	☐ Rafting			
☐ Hunting	пτ	rapping	☐ Fishing		☑ None	of the above	☐ Other:			
Describe:	l .	-1-1- 5	<u> </u>							

WBID#	899
Site #	3

Surrounding Conditi	ions:				
☐ City/County parks	☐ playgrounds	☐ MDC conservation	on lands 🔲 Urb	an areas	☑ Rural Residential
☐ Campgrounds	☐ State parks	□ National Forests	☐ Natu	ıre trails	☐ Stairs/walkways
☐ Boating accesses	☐ Fence	□ No tresspass sig	n ☐ Stee	p Slopes	☐ Other:
Comments:					
none					
Evidence of Human	lleo:				
□ Roads	☐ Foot path/prints	☐ Dock/platform	□ Carr	nping Sites	☐ Rope swings
☐ ROads ☐ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Discharg		ing Tackle	☐ Livestock watering
comments/other:	L I II C Pitting	LINI DEC DIOGIA. 3	e [D.1.c	Ilig raomo	LIVESTOOK WATERING
none					
110.10					
Substrate:					
% Cobble	% Gravel	% Sand	% Silt	0/ Mud/(Clay % Bedrock
% Cobbie	% Gravei 10	% Sanu	% Silt 50	% Mud/0 40	
	10		50	70	
Aquatic Vegatation:					
none					
	_	_	_	_	_
Water Characteristic					
Odor:	☐ Sewage	□ Musky	☐ Chemical		None ☐ Other:
Color:	☐ Clear	□Green	☐ Gray	<u> </u>	Milky ☑ Other:
Dellera Danasiti		T Calida	T Fine podimoni	·- 17/1	brown
Bottom Deposit:	☐ Sludge ☐ Oil	☐ Solids ☐ Scum	☐ Fine sediment☐ Foam		None ☐ Other: Ione ☐ Other:
Surface Deposit:		LI Scuiii	⊔ ruaiii	١١١٧	

Field Data Sheets for Recreational Use Stream Surveys

itional Stream Morphology : (Record isolated pools or other feature	s identified during the surve	y that may support recreational uses)
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Channel Feature	Distance from	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
	access location (m)				
omments: (Please re	cord any additional comments	here.)			
	•	,			
ne					
-					
	hava aamamlatad all a		ماطمعالمسالمها	haves and that the	famm !a
	ou have completed all s	ections, check	eu ali applicable	boxes, and that the	IOIIII IS
omplete.					
rveyor's Signature:	gilisa gould		_Date of Survey:	10.23.07	
Organization:	SES, Inc		Position:	field team leader	

																		Disso	lved Ox	ygen		
	Waterbo	ody ID:	899			Site #:	3									Date:	10.23.07	,		Time:	17:40	
	Estimate	ed Chann	nel Incisi	on:	3.0	(m) (hei	ght betw	een low b	ank wid	th and wa	ater)					•				•		
	GPS Loc	cation - I	Easting (UTM X)	Northin	g (UTM	Y). Hor	izontal Ac	ecuracy I	Estimate	(EPE / P	DOP / FO	OM)			Di	.5501VCu V	JAYECII.		3.3	(IIIg/L)	
		UTM X	•	0466324	1	1	UTM Y:		4337790	0	•	+/-		(meters)		Di	ssolved (Oxygen:			(% sat)	
	11	UTM X		0466580)	1	UTM Y:		433778	5	•	+/-	7.9	(meters)								
	Average	Stream	Width:				8	(meters)	I.	ength of	Survey S	Segment		160	(meters)		Specifi	c Cond:			(μS/cm)	
			ngth of I				-	(111 1)	•	20x avera	-	-			()	Wa	ter Temp	erature:		12.4	(°C)	
		1.0. 00					a::: a															
	Fiel	d Staff:	Larissa	a Brown		and	Gilisa G	ould						i								
										Tra	nsect C	ross-Se	ction									
	0	1	0	2	0	3	()4	()5	0	16		07	08	}	0	9	1	0	1	1
Station	Distance (m)	B 4()	Distance (m)	B 4()	Distance (m)	B 4()	Distance (m)	D 4()	Distance (m)	B 4()	Distance (m)	D 1()	Distance (m)	D 4()	Distance (m)	B 4 ()	Distance (m)	D 4()	Distance (m)	B 4()	Distance (m)	
Station	0	Depth (m)	0	Depth (m)	0	Depth (m)	0	Depth (m)	0	Depth (m)	0	Depth (m)	0		0	• 1	0	Depth (m)	0	Depth (m)	0	Depth (m)
Left Bank		0		0		0	U	0		0		0		0	U	0	U	0	U	0	U	0
1	0.7	0.30	0.8	0.10	0.8	0.15	0.6	0.20	0.5	0.05	0.8	0.10	0.7	0.05	0.8	0.05	0.5	0.05	0.6	0.01	0.8	0.10
2	1.4	0.40	1.6	0.35	1.6	0.35	1.2	0.60	1.0	0.15	1.6	0.80	1.4	0.05	1.6	0.40	1.0	0.40	1.2	0.01	1.6	0.45
3	2.1	0.95	2.4	0.70	2.4	0.55	1.8	0.95	1.5	0.30	2.4	1.00	2.1	0.00	2.4	0.70	1.5	0.70	1.8	0.20	2.4	0.75
4	2.8	1.00	3.2	0.65	3.2	0.90	2.4	1.00	2.0	0.55	3.2	1.00	2.8	0.10	3.2	0.75	2.0	0.60	2.4	0.35	3.2	1.00
5	3.5	1.00	4.0	0.55	4.0	1.00	3.0	1.00	2.5	0.55	4.0	1.00	3.5	0.40	4.0	0.65	2.5	0.60	3.0	0.50	4.0	1.00
6	4.2	1.00			4.8			1.00			4.8			0.00	4.8	0.30		0.35	3.6			0.85
7	4.9	1.00			5.6			1.00			5.6				5.6	0.20		0.30	4.2			0.70
,																						
8	5.6	0.95	6.4		6.4	0.80	4.8	0.40			6.4				6.4	0.10		0.20	4.8			0.45
9	6.3	0.45	7.2	0.10	7.2	0.70	5.4	0.05	4.5	0.05	7.2	0.05	6.3	0.05	7.2	0.05	4.5	0.05	5.4	0.30	7.2	0.10
Right Bank	7.0	0.00	8.0	0.00	8.0	0.00	6.0	0.00	5.0	0.00	8.0	0.00	7.0	0.00	8.0	0.00	5.0	0.00	6.0	0.00	8.0	0.00
Feature Type																						
riffle, run, or pool	po	ol	po	ool	po	ol	po	ool	po	ool	pc	ool	ri	ffle	poo	ol	po	ol	po	ol	po	ol

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This with is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing weted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

Signed. gillså gould Date. 11.01.07	Signed:	gılısa gould	Date:	11.01.07
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WBID#	899
Site #	4

Date & Time:	10.24.0	7 9:45		Site Location	on Descrip	tion (e.g. road	crossing):	
Personnel:	Larissa	Brown and Gilisa G	ould	upstream from Hwy 127				
Current Weatl	ner Cond	ditions: clear		Facility Nar	Facility Name: Alma Sewage Treatment Lagoon			
Weather cond	litions fo	r the past 10 days:4	.65 inches	Permit Nun	nber:	MO 0048097		
Drought condi	itions?: N	No drought ☑ ; Phas	se I □ ; Phase	· II □ ; Phas	e III □ ; PI	nase IV □ ; Ur	nknown 🗆	
Site Location):							
		(Universal Transver	se Mercator Pr	rojection, In	Meters			
Site 01	Easting	(UTM X):	Northing (UTI	И Y):		Horizontal Ac	curacy:	Meters
		0463173		4337449			11.6	3
Site 11	Easting	(UTM X):	Northing (UTM Y): Horizontal A				curacy:	Meters
		0463402		4337464			3.4	4
		0400402		4007404			<u> </u>	<u> </u>
Photos:			1	1				
Photo ID#	F	Photo Purpose	Photo ID#:	Photo F	Purpose	Photo ID#:	Photo Purpose	
34		downstream, T1 35		upstream, T1		36	pipe on bank of creek	
Photo ID#	P	hoto Purpose	Photo ID#	Photo F	ourpose	Photo ID#	Photo Purpose	
37		downstream, T11	38	upstream,	T11			
Photo ID#	P	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose	
Uses Observ	ed:							
☐ Swimming	l	☐ Skin diving	□ SCUBA d	iving	☐ Tubin	g	☐ Water Skiing	
☐ Wind surfi	ng	☐ Kayaking	□ Boating		□ Wadir	ng	□ Rafting	
☐ Hunting		☐ Trapping	☐ Fishing		☑ None	of the above	☐ Other:	
Describe:		777 3	<u> </u>					

WBID#	899
Site #	4

	Data 011001 D		, (CO	, a.o.a.,		
Surrounding Condition	ons:					
☐ City/County parks	☐ playgrounds	☐ MDC conservati	on lands	☐ Urban areas	☐ Rural F	Residential
☐ Campgrounds	☐ State parks	□ National Forests	š	☐ Nature trails	☐ Stairs/v	walkways
☐ Boating accesses	☐ Fence	☐ No tresspass sig	gn	☐ Steep Slopes	☐ Other:	
Comments:						
none						
Evidence of Human l	Haar					
□ Roads	□ Foot path/prints	☐ Dock/platform		☐ Camping Sites	☐ Rope s	winge
☐ R0ads ☐ RV/ATV Tracks	☐ Foot path/prints	☐ NPDES Discharg		☐ Fishing Tackle	•	ock watering
comments/other:	LI FILE PIVILING	LI INF DEO DISORGE	ie i	LI FISHING TACKIC	LIVESIO	CK Watering
none						
110.10						
•						
Substrate:						
% Cobble		% Sand	% Silt	% Mud/0	-	% Bedrock
	30	10	30	30		
	_	<u> </u>		_		_
Aquatic Vegatation:						
none						
Water Characteristics	· c ·					
Odor:	□ Sewage	☐ Musky	☐ Chemi	ical 🗹	None	☐ Other:
Color:	☐ Clear	□Green	☐ Gray		Milky	☑ Other:
00.01.					71vj	brown
Bottom Deposit:	☐ Sludge	☐ Solids	☐ Fine se	ediments 🗹 l	None	☐ Other:
Surface Deposit:	□ Oil	☐ Scum	☐ Foam		None	☐ Other:

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature Distance from Width (m) Length (m) Median Depth (m) Max Depth (m)

Channel Feature	Distance from	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
	access location (m)		1		
				•	
	1 199				
omments: (Please re	cord any additional comments l	here.)			
one					
lease verify that vo	u have completed all s	ections check	ed all applicable	hoxes and that the	form is
omplete.	a navo completea an c	ootiono, onoon	oa an apphoablo	boxoo, and that the	
inplete.					
	. 92 1.1		D.110 .	10.04.07	
rveyor's Signature:	gilisa gould		_Date of Survey:	10.24.07	
Organization:	SES, Inc.			field team leader	

																		Disso	lved Ox	ygen		
	Waterbo				-		4									Date:	10.24.07			Time:	9:45	
								een low b			ŕ					Di	ssolved (Oxygen:		9.8	(mg/L)	
	01	ution - l UTM X UTM X	:	OTM X) 0463173 0463402	3	1	UTM Y:	izontal Ac	433744	9		DOP / FO +/- +/-	OM) 11.6 3.4	(meters)		Di	issolved (Oxygen:			(% sat)	
		e Stream				-		,		ength of	•				(meters)		Specifi	c Cond:			(µS/cm)	
		ermne Le								20x avera	-	-				Wa	iter Temp	erature:		14.1	(°C)	
	Fiel	ld Staff:	Lariss	a Brown		and	Gilisa G	ould														
										Tra	nsect C	ross-Se	ction									
	0)1	0	2	0	3		04	()5	0	16		07	08	3	0:	9	1	0	1:	1
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m
eft Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.7	0.20	0.6	0.15	0.7	0.15	0.7	0.20	0.8	0.15	0.7	0.20	0.7	0.01	0.6	0.20	0.6	0.20	0.5	0.01	0.4	0.05
2	1.4	0.25	1.2	0.25	1.4	0.70	1.4	0.55	1.6	0.35	1.4	0.50	1.4	0.15	1.2	0.60	1.2	0.75	1.0	0.05	0.8	0.15
3	2.1	0.40	1.8	0.25	2.1	0.80	2.1	0.65	2.4	0.50	2.1	0.45	2.1	0.30	1.8	0.60	1.8	0.75	1.5	0.15	1.2	0.25
4	2.8	0.50	2.4	0.35	2.8	0.95	2.8	0.65	3.2	0.45	2.8	0.45	2.8	0.35	2.4	0.75	2.4	0.80	2.0	0.05	1.6	0.20
5	3.5	0.60	3.0	0.30	3.5	1.00	3.5	0.60	4.0	0.35	3.5	0.45	3.5	0.25	3.0	0.80	3.0	0.70	2.5	0.05	2.0	0.20
6	4.2	0.55	3.6	0.25	4.2	1.00	4.2	0.50	4.8	0.25	4.2	0.40	4.2	0.30	3.6	0.50	3.6	0.60	3.0	0.10	2.4	0.20
7	4.9	0.40	4.2	0.30	4.9	1.00	4.9	0.40	5.6	0.25	4.9	0.35	4.9	0.40	4.2	0.25	4.2	0.50	3.5	0.65	2.8	0.15
8	5.6	0.35	4.8	0.20	5.6	0.95	5.6	0.30	6.4	0.25	5.6	0.05	5.6	0.30	4.8	0.25	4.8	0.30	4.0	0.15	3.2	0.05
9	6.3	0.10	5.4	0.05	6.3	0.40	6.3	0.20	7.2	0.20	6.3	0.05	6.3	0.10	5.4	0.15	5.4	0.15	4.5	0.05	3.6	0.01
ight Bank	7.0	0.00	6.0	0.00	7.0	0.00	7.0	0.00	8.0	0.00	7.0	0.00	7.0	0.00	6.0	0.00	6.0	0.00	5.0	0.00	4.0	0.00
eature Type	n	ool	no	ool	no	ool	n	ool	n	ool	n	ool	,	ool	no	ol	po	ol	ро	ol	rifi	fla
ffle, run, or pool	ρc	JUI	ρc	101	рс	701	p	1001	ρ	JUI	ρC	<i>7</i> 01	Р	UUI	po	O1	ρo	UI	ρo	UI	1111	II C

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing weted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

Signed. ginsa gould Date. 11.01.07	Signed:	gılısa gould	Date:	11.01.07
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WBID#	899
Site #	5

Date & Time:	10.24.07 10:4	0	Site Location Description (e.g. road crossing):				
Personnel:	Larissa Brown and Gilisa	Gould	CR 415				
Current Weatl	her Conditions: clear		Facility Nar	Facility Name: Alma Sewage Treatment Lagoor			
Weather cond	litions for the past 10 days:	4.65 inches	Permit Nun	nber:	MO0048097		
Drought condi	itions?: No drought ☑; Ph	ase I □ ; Phase	□ ; Phas	e III □ ; Pl	nase IV □ ; Ur	nknown 🗆	
Site Location	1:						
	rdinates (Universal Transve	rse Mercator P	rojection, In	Meters			
Site 01	ite 01 Easting (UTM X): Northi		M Y):		Horizontal Ac	curacy: Meter	
	0461439		4337285			6.7	
Site 11	Easting (UTM X):	M Y):		Horizontal Ac	curacy: Meter		
	0461683		4337299			1.8	
	0.0.000		100. 200				
Photos:	1		T		1	Γ	
Photo ID#	Photo Purpose	Photo ID#:	Photo F	Purpose	Photo ID#:	Photo Purpose	
39	39 downstream, T1		upstream, T1		41	downstream, T11	
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose	
42	upstream, T11						
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose	
Uses Observ	ed:	<u> </u>		<u> </u>			
☐ Swimming	g ☐ Skin diving	☐ SCUBA d	iving	☐ Tubing	g	□ Water Skiing	
□ Wind surfi	ing □ Kayaking	☐ Boating		□ Wadin	ng	□ Rafting	
☐ Hunting	□ Trapping	☐ Fishing		☑ None o	of the above	☐ Other:	
Describe:							

WBID#	899
Site #	5

Surrounding Conditi	ions:					
☐ City/County parks	□ playgrounds	☐ MDC conservation	on lands □ Urba	an areas	☐ Rural Res	idential
☐ Campgrounds	☐ State parks	□ National Forests	□ Natur	re trails	☐ Stairs/wall	kways
☐ Boating accesses	☐ Fence	☐ No tresspass sig	n □ Steer	p Slopes	☐ Other:	
Comments:						
none						
Evidence of Human	Haar					
□ Roads	☐ Foot path/prints	☐ Dock/platform	I □ Cam	nina Sitas	I□ Dono ewir	
☐ RV/ATV Tracks	☐ Foot path/prints	☐ NPDES Discharg		ping Sites ng Tackle	☐ Rope swin	
comments/other:	L I lie bining	LI INF DEO DISCHARY	С Ш г ю ш	ly racine	LI LIVESTOCK	Watering
none						
110110						
Substrate:						
% Cobble	% Gravel	% Sand	% Silt	% Mud/C		Bedrock
10	20	10	30	30		
Aquatic Vegatation:						
nana						
none						
Water Characteristic	es:					
Odor:	☐ Sewage	☐ Musky	☐ Chemical	₫ 1	None 🗆	Other:
Color:	☐ Clear	□Green	☐ Gray			Other:
4 -			<u>-</u>			
			_		bro	own
Bottom Deposit:	☐ Sludge	☐ Solids ☐ Scum	☐ Fine sediments☐ Foam		None □	own Other: Other:

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational uses)

Channel Feature | Distance from | Width (m) | Length (m) | Median Depth (m) | Max Depth (m)

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
Comments: (Please re	cord any additional comments	here.)			
none					
Please verify that yo complete.	ou have completed all s	ections, checke	ed all applicable	boxes, and that the	form is
Surveyor's Signature:	gilisa gould		_Date of Survey:	10.24.07	

																		Disso	lved Ox	ygen		
	Waterbo	ody ID:	899			Site #:	5		•							Date:	10.24.07			Time:	10:40	
	Estimate	ed Chanr	nel Incisi	on:	2.0	(m) (hei	ight betw	een low b	ank wid	th and wa	ater)						ssolved (•	(mg/L)	
								izontal Ac	-		(EPE / P	DOP / FO	OM)								(mg/L)	
		UTM X UTM X		0461439			UTM Y: UTM Y:		433728			+/-	6.7 1.8	(meters)	•	Di	ssolved (Oxygen:			(% sat)	
						_1								/	•		Specifi	c Cond:			(µS/cm)	
	_	e Stream ermne Le					7	(meters)		ength of 20x avera	-	-		150	(meters)	Wa	iter Temp	erature:		11.4	(°C)	
	Fiel	ld Ctoff	Loriga	o Drown		and	Gilisa G	Sould										•				
	Fiel	ld Staff:	Lariss	a Brown		and	Gilisa G	rouia														
			T T				T T			Tra	nsect C	ross-Se	ction									
	_)1	0	2		3	_	04)5		6		07	08	3	0:	9	1	0	11	1
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
eft Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.7	0.05	0.6	0.01	0.7	0.05	0.7	0.10	0.7	0.10	0.6	0.01	0.5	0.01	0.5	0.05	0.6	0.01	0.6	0.01	0.3	0.01
2	1.4	0.01	1.2	0.05	1.4	0.20	1.4	0.30	1.4	0.25	1.2	0.05	1.0	0.05	1.0	0.05	1.2	0.01	1.2	0.01	0.6	0.05
3	2.1	0.01	1.8	0.10	2.1	0.30	2.1	0.25	2.1	0.25	1.8	0.00	1.5	0.10	1.5	0.05	1.8	0.05	1.8	0.05	0.9	0.10
4	2.8	0.00	2.4	0.10	2.8	0.40	2.8	0.20	2.8	0.20	2.4	0.00	2.0	0.05	2.0	0.05	2.4	0.05	2.4	0.05	1.2	0.15
5	3.5	0.01	3.0	0.10	3.5	0.50	3.5	0.20	3.5	0.15	3.0	0.01	2.5	0.20	2.5	0.05	3.0	0.05	3.0	0.10	1.5	0.15
6	4.2	0.10	3.6	0.05	4.2	0.50	4.2	0.25	4.2	0.15	3.6	0.05	3.0	0.30	3.0	0.10	3.6	0.05	3.6	0.10	1.8	0.20
7	4.9	0.10	4.2	0.10	4.9	0.55	4.9	0.30	4.9	0.20	4.2	0.05	3.5	0.10	3.5	0.15	4.2	0.10	4.2	0.10	2.1	0.20
8	5.6	0.05	4.8	0.05	5.6	0.45	5.6	0.40	5.6	0.30	4.8	0.10	4.0	0.10	4.0	0.20	4.8	0.15	4.8	0.15	2.4	0.05
9	6.3	0.05	5.4	0.10	6.3	0.20	6.3	0.20	6.3	0.20	5.4	0.10	4.5	0.05	4.5	0.15	5.4	0.15	5.4	0.15	2.7	0.05
ight Bank	7.0	0.00	6.0	0.00	7.0	0.00	7.0	0.00	7.0	0.00	6.0	0.00	5.0	0.00	5.0	0.00	6.0	0.00	6.0	0.00	3.0	0.00
eature Type		eci -		ea -		1		1		1		1		1		-1		-1	_	-1	_	_1
ffle, run, or pool	rıt	ffle	rit	fle	pc	ool	p	ool	po	ool	pc	ool	p	ool	po	Ol	po	Ol	po	Ol	po	Ol

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

Signed: gilisa gould Date: 11.01.07	
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WBID#	899
Site #	6

Date & Time:	10.24.07 11	:15	Site Location	on Descrip	tion (e.g. road	crossing):					
Personnel:	Larissa Brown and Gilis	a Gould		CR 401							
Current Weatl	ner Conditions: clear		Facility Nar	ne:	Alma Sewage	e Treatment Lagoon					
Weather cond	litions for the past 10 day	ys:4.65 inches	Permit Nun	Permit Number: MO0048097							
Drought condi	itions?: No drought ☑ ; F	Phase I □ ; Phase	e II □ ; Phas	e III □ ; PI	nase IV □ ; Uı	nknown 🗆					
Site Location: Location Coordinates (Universal Transverse Mercator Projection, In Meters											
			•	Meters							
Site 01	Easting (UTM X):	Northing (UTN	•		Horizontal Ac	•					
	0459129	+	4336852			5.2					
Site 11	Easting (UTM X):	Northing (UTN	Northing (UTM Y):			ccuracy: Meters					
	0459299		4336983	4.3							
Photos:											
Photo ID#	Photo Purpose	Photo ID#:	Photo F	urpose	Photo ID#:	Photo Purpose					
43	downstream, T	1 44	upstream,	Γ1	45	downstream, T11					
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose					
46	upstream, T11										
Photo ID#	Photo Purpose	Photo ID#	Dhoto F	Purpose	Photo ID#	Photo Purpose					
PHOLO ID#	Photo Purpose	PHOTO ID#	PIIOLOF	urpose	PHOLO ID#	Prioto Purpose					
		L									
Hann Ohner	- d.										
Uses Observ ☐ Swimming	-	□ SCUBA di	iving	☐ Tubin	<u> </u>	☐ Water Skiing					
☐ Wind surfi		☐ Boating	iving	□ Wadir		☐ Rafting					
☐ Hunting Describe:	☐ Trapping	☐ Fishing		✓ None	☐ Other:						
Bescribe.											

WBID#	899
Site #	6

Surrounding Conditi	ions:				
☐ City/County parks	□ playgrounds	☐ MDC conservati	on lands [☐ Urban areas	☑ Rural Residential
☐ Campgrounds	☐ State parks	□ National Forests	3 [☐ Nature trails	☐ Stairs/walkways
☐ Boating accesses	☐ Fence	☐ No tresspass sig	gn [☐ Steep Slopes	☐ Other:
Comments:					
none					
Evidence of Human		□ Dook/platform	Ti	Compine Sites	I Dana awinge
☐ Roads ☐ RV/ATV Tracks	☐ Foot path/prints ☐ Fire pit/ring	☐ Dock/platform☐ NPDES Dischard		☐ Camping Sites☐ Fishing Tackle	☐ Rope swings ☐ Livestock watering
	☐ File piviling	ווירטבט טוטטומון 🗆	je Ir	- FISHING TACKIE	LIVESTOCK Watering
comments/other: none					
Substrate: % Cobble	% Gravel	% Sand	% Silt	% Mud/0	•
	20	20	20	40	1
Aquatic Vegatation:					
none					
Water Characteristic					
Odor:	☐ Sewage	□ Musky	☐ Chemic		None
Color:	☐ Clear	□Green	□ Gray	<u> </u>	Milky ☑ Other:
Dattara Danasiti		T 041144	T Fine se	-!:to [7] [brown
Bottom Deposit: Surface Deposit:	☐ Sludge ☐ Oil	☐ Solids ☐ Scum	☐ Fine se		None ☐ Other: None ☐ Other:
Surface Deposit.		□ Scuiii	□ Fuain		

Organization: SES, Inc.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recreational us	Additional Stream Mor	rphology: (Record isolated	pools or other features identified during	g the survey that may support recreational us
--	-----------------------	----------------------------	---	---

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
			l		_
omments: (Please re	ecord any additional comments	here.)			
ne					
TIC .					
nic .					
inc					
	ou have completed all s	ections, checke	ed all applicable	boxes, and that the	form is

Position: field team leader

																		Disso	lved Ox	ygen		
	Waterbo	,			-		6									Date:	10.24.07	,		Time:	11:15	
								reen low b			,					Di	ssolved (Oxygen:		8.0	(mg/L)	
	01	cation - I UTM X: UTM X:	:	UTM X) 0459129 0459299)	1	UTM Y:	izontal Ac	4336852	2	•	DOP / FO +/- +/-	OM) 5.2 4.3	(meters)		Di	ssolved (Oxygen:			(% sat)	
		,		0439295						ength of	•			(meters)	(meters)		Specifi	c Cond:			(µS/cm)	
		rmne Le					0	(meters)		20x avera		_		130	(meters)	Wa	ter Temp	erature:		20.8	(°C)	
	Fiel	d Staff:	Lariss	a Brown		and	Gilisa G	ould														
										Tra	nsect C	ross-Se	ction									
01		01 02		01 02		02 03 04		O	05 06			07	08		09		10		11			
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.7	0.05	0.5	0.10	0.6	0.05	0.7	0.05	0.5	0.05	0.6	0.10	0.5	0.05	0.5	0.10	0.7	0.05	0.6	0.05	0.5	0.10
2	1.4	0.05	1.0	0.25	1.2	0.25	1.4	0.15	1.0	0.15	1.2	0.30	1.0	0.01	1.0	0.20	1.4	0.15	1.2	0.05	1.0	0.25
3	2.1	0.10	1.5	0.30	1.8	0.30	2.1	0.05	1.5	0.20	1.8	0.25	1.5	0.00	1.5	0.25	2.1	0.25	1.8	0.10	1.5	0.35
4	2.8	0.10	2.0	0.15	2.4	0.25	2.8	0.05	2.0	0.25	2.4	0.25	2.0	0.10	2.0	0.25	2.8	0.15	2.4	0.10	2.0	0.30
5	3.5	0.15	2.5	0.20	3.0	0.25	3.5	0.05	2.5	0.20	3.0	0.30	2.5	0.20	2.5	0.20	3.5	0.25	3.0	0.10	2.5	0.25
6	4.2	0.15	3.0	0.20	3.6	0.25	4.2	0.05	3.0	0.15	3.6	0.25	3.0	0.25	3.0	0.20	4.2	0.25	3.6	0.05	3.0	0.25
7	4.9	0.10	3.5	0.20	4.2	0.20	4.9	0.05	3.5	0.15	4.2	0.15	3.5	0.20	3.5	0.20	4.9	0.25	4.2	0.01	3.5	0.20
8	5.6	0.10	4.0	0.20	4.8	0.20	5.6	0.01	4.0	0.10	4.8	0.05	4.0	0.10	4.0	0.15	5.6	0.25	4.8	0.01	4.0	0.15
9	6.3	0.05	4.5	0.20	5.4	0.10	6.3	0.01	4.5	0.05	5.4	0.05	4.5	0.05	4.5	0.10	6.3	0.10	5.4	0.01	4.5	0.05
aight Bank	7.0	0.00	5.0	0.00	6.0	0.00	7.0	0.00	5.0	0.00	6.0	0.00	5.0	0.00	5.0	0.00	7.0	0.00	6.0	0.00	5.0	0.00
eature Type		.al		1		. a1		1		. a1		. a1		a a 1	.	a.1	.	al.	ع:	g a	ar -	a1
iffle, run, or pool	po	100	pc	ool	pc	ool	p	ool	po	ool	pc	ool	p	ool	po	UI	po	OI	riff	пе	po	UI

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

Signed: gilisa gould Date: 11.01.05	Signed: gilisa gould Date: 11.0	11 ()5
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WBID#	899
Site #	7

Date & Time:	10.24.07	2:55	Site Location	on Descrip	tion (e.g. road	crossing):					
Personnel:	Larissa Brown and Gili	sa Gould		CR 276							
Current Weat	ner Conditions: clear		Facility Nar	me:	Alma Sewage	e Treatment Lagoon					
Weather cond	litions for the past 10 da	ys:4.65 inches	Permit Nun	Permit Number: MO0048097							
Drought cond	tions?: No drought ☑ ;	Phase I □ ; Phase	e II □ ; Phas	e III □ ; PI	nase IV □ ; Ur	nknown 🗆					
Site Location: Location Coordinates (Universal Transverse Mercator Projection, In Meters											
			<u> </u>	Meters							
Site 01	Easting (UTM X):	Northing (UTI	•		Horizontal Ac	•					
	0456127		4335512			2.4					
Site 11	Easting (UTM X):	Northing (UTI	Northing (UTM Y):			ccuracy: Meters					
	0456345		4335595	4.6							
Photos:											
Photo ID#	Photo Purpose	Photo ID#:	Photo F	urpose	Photo ID#:	Photo Purpose					
47	downstream, T	1 48	upstream,	<u>Γ1</u>	49	downstream, T11					
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose		Photo ID#	Photo Purpose					
50	upstream, T11										
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose					
T HOLO ID#	1 Hoto i dipose	1 11010 12#	1 110101	шрозс	T HOLO ID#	T Hoto T dipose					
]						
Uses Observ	ed:										
☐ Swimming		□ SCUBA d	living	☐ Tubin	g	☐ Water Skiing					
☐ Wind surfi		☐ Boating		□ Wadir		☐ Rafting					
☐ Hunting	☐ Trapping	☐ Fishing			of the above	Ť Ť					
Describe:	1 -11- 3										

WBID#	899
Site #	7

			,		
Surrounding Conditi	ions:				
☐ City/County parks	□ playgrounds	☐ MDC conservation	on lands 🔲 Urba	an areas	☐ Rural Residential
☐ Campgrounds	☐ State parks	□ National Forests		re trails	☐ Stairs/walkways
☐ Boating accesses	☑ Fence	☐ No tresspass sig	ın □ Stee	p Slopes	☐ Other:
Comments:	<u>. I</u>				<u> </u>
none					
Evidence of Human	Haar				
□ Roads	☐ Foot path/prints	☐ Dock/platform	I □ Cam	ping Sites	☐ Rope swings
☐ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Discharg		ing Tackle	☐ Livestock watering
comments/other:	I I II O PIUTING	L 141 DEO DIOGNA. 3	jo ₁ =c	ing raoise	LIVOOLOOK MALO
none					
= - , .					
Substrate:			21 2111	2/ 341/6	0/ Dada d
% Cobble	% Gravel	% Sand	% Silt	% Mud/C	Clay % Bedrock
20	20		20	40	
Aquatic Vegatation:					
Aquatic Vogatatio					
none					
110.10					
Water Characteristic					
Odor:	□ Sewage	□ Musky	☐ Chemical		None Other:
Color:	☐ Clear	□Green	☐ Gray		Milky ☑ Other:
	-				brown
Bottom Deposit:	□ Sludge	□ Solids	☐ Fine sediment		None
Surface Deposit:	□ Oil	☐ Scum	☐ Foam	M⊠	one ☐ Other:

Field Data Sheets for Recreational Use Stream Surveys

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that	may support recreational uses)
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	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
	access location (m)				
	1				
			<u> </u>		
omments: (Please red	cord any additional comments	here.)			
one					
	have completed all a	antiama ahaaka	d all applicable	hove and that the	form:
	u have completed all s	sections, checke	d all applicable	boxes, and that the	form is
lease verify that yo omplete.	u have completed all s	sections, checke	d all applicable	boxes, and that the	form is
	u have completed all s	ections, checke	d all applicable	boxes, and that the	form is
omplete.					form is
omplete.	u have completed all s gilisa gould		d all applicable Date of Survey:		form is
omplete. urveyor's Signature:			Date of Survey:		form is

																		Disso	lved Ox	ygen		
	Waterbo	•														Date:	10.24.07	7		Time:	12:55	
								een low b				DOD / E/				Di	ssolved	Oxygen:		9.1	(mg/L)	
	01	cation - I UTM X UTM X	:	0456127 0456345	7	. 1	UTM Y:	izontal Ac	4335512	2	•	DOP / FO +/- +/-	OM) 2.4 4.6	(meters)	,	Di	ssolved	Oxygen:			(% sat)	
			Width:			1)				ength of	•				(meters)		Specifi	c Cond:			(µS/cm)	
			ngth of F				,	(meters)		20x avera	-	-		130	(Hieters)	Wa	ter Temp	oerature:		22.8	(°C)	
	Fiel	d Staff:	Larissa	a Brown		and	Gilisa G	ould						·								
										Tra	nsect C	ross-Se	ction									
	0	1	0	2	0	3		04	0)5	0	6	(07	08	8	0	9	10	0	11	1
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.7	0.15	0.7	0.30	0.5	0.50	0.7	0.20	0.7	0.15	0.7	0.20	0.7	0.05	0.7	0.05	0.7	0.20	0.7	0.25	0.6	0.10
2	1.4	0.15	1.4	0.65	1.0	0.65	1.4	0.45	1.4	0.30	1.4	0.35	1.4	0.30	1.4	0.40	1.4	0.55	1.4	0.55	1.2	0.35
3	2.1	0.10	2.1	0.65	1.5	0.70	2.1	0.45	2.1	0.50	2.1	0.35	2.1	0.30	2.1	0.40	2.1	0.60	2.1	0.65	1.8	0.55
4	2.8	0.15	2.8	0.60	2.0	0.65	2.8	0.45	2.8	0.50	2.8	0.35	2.8	0.35	2.8	0.35	2.8	0.60	2.8	0.60	2.4	0.60
5	3.5	0.20	3.5	0.50	2.5	0.65	3.5	0.45	3.5	0.50	3.5	0.35	3.5	0.30	3.5	0.40	3.5	0.55	3.5	0.60	3.0	0.50
6	4.2	0.25	4.2	0.35	3.0	0.60	4.2	0.40	4.2	0.40	4.2	0.25	4.2	0.30	4.2	0.40	4.2	0.50	4.2	0.60	3.6	0.45
7	4.9	0.30	4.9	0.30	3.5	0.55	4.9	0.40	4.9	0.30	4.9	0.15	4.9	0.30	4.9	0.35	4.9	0.45	4.9	0.45	4.2	0.35
8	5.6	0.30	5.6	0.20	4.0	0.45	5.6	0.25	5.6	0.20	5.6	0.10	5.6	0.25	5.6	0.15	5.6	0.35	5.6	0.30	4.8	0.35
9	6.3	0.20	6.3	0.15	4.5	0.30	6.3	0.10	6.3	0.05	6.3	0.05	6.3	0.15	6.3	0.10	6.3	0.15	6.3	0.10	5.4	0.10
ight Bank	7.0	0.00	7.0	0.00	5.0	0.00	7.0	0.00	7.0	0.00	7.0	0.00	7.0	0.00	7.0	0.00	7.0	0.00	7.0	0.00	6.0	0.00
eature Type		-1		-1		1		1		1		1		1		_1		-1		-1		-1
ffle, run, or pool	po	100	po	ool	pc	ool	p	ool	po	ool	pc	ool	p	ool	po	Ol	po	100	po	Ol	po	OI

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

Biglied. Butc. 11.01.07	Signed: gilisa gould Date: 11.01.07	
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WBID#	899
Site #	8

Date & Time:	10.24.07 13:4	0	Site Location	on Descrip	tion (e.g. road	crossing):	
Personnel:	Larissa Brown and Gilisa	Gould		Hwy 23			
Current Weatl	her Conditions: clear		Facility Nar	me:	Alma Sewage	e Treatment Lagoon	
Weather cond	ditions for the past 10 days:	4.65 inches	Permit Nun	nber:	MO0048097		
Drought condi	itions?: No drought ☑; Ph	ase I □ ; Phase	□ ; Phas	e III □ ; PI	hase IV □ ; Ur	nknown □	
Site Location	1:						
	rdinates (Universal Transve	erse Mercator P	rojection, In	Meters			
Site 01	Easting (UTM X):	Northing (UTI	M Y):		Horizontal Ac	curacy:	Meters
	0452735		4335111			5	.1
Site 11	Easting (UTM X):	Northing (UTI	M Y):		Horizontal Ac	ccuracy:	Meters
	0452951		4335117			3	.9
	0.10200.		1000			<u> </u>	.0
Photos:	1		т		Т	T	
Photo ID#	Photo Purpose	Photo ID#:	Photo F	Purpose	Photo ID#:	Photo Purpose	е
51	downstream, T1	52	upstream,	T1	53	downstream, T11	
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose	<u>e</u>
54	upstream, T11						
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose	е
Uses Observ	ed:			<u> </u>			
☐ Swimming	g ☐ Skin diving	☐ SCUBA d	living	☐ Tubin	<u>g</u>	☐ Water Skiing	
□ Wind surfi	ing □ Kayaking	☐ Boating		□ Wadir	ng	☐ Rafting	
☐ Hunting	□ Trapping	☐ Fishing		☑ None	of the above	☐ Other:	
Describe:							

WBID#	899
Site #	8

Surrounding Condition	ons:				
☐ City/County parks	☐ playgrounds	☐ MDC conservat	tion lands	□ Urban areas	☐ Rural Residential
☐ Campgrounds	☐ State parks	□ National Forest	S	□ Nature trails	☐ Stairs/walkways
☐ Boating accesses	☐ Fence	☐ No tresspass si	ign	☐ Steep Slopes	☐ Other:
Comments:					•
none					
Evidence of Human l		1	1		τ
□ Roads	☐ Foot path/prints	☐ Dock/platform		☐ Camping Sites	☐ Rope swings
☐ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Dischar	ge	☐ Fishing Tackle	☐ Livestock watering
comments/other:					
none					
Substrato:					
Substrate:	% Gravel	% Sand	% Silt	% Mud/	Clay % Redrock
Substrate: % Cobble	% Gravel	% Sand	% Silt	% Mud/0	•
	% Gravel 40	% Sand 20	% Silt	% Mud/0 40	•
			% Silt		•
% Cobble Aquatic Vegatation:			% Silt		•
% Cobble			% Silt		•
% Cobble Aquatic Vegatation:			% Silt		•
% Cobble Aquatic Vegatation:			% Silt		•
% Cobble Aquatic Vegatation:	40		% Silt		•
% Cobble Aquatic Vegatation: none	40 s:	20	% Silt	40	•
% Cobble Aquatic Vegatation: none Water Characteristics	40			40 cal ☑ I	
% Cobble Aquatic Vegatation: none Water Characteristic: Odor:	40 s: □ Sewage	20	□ Chemic	40 cal ☑ I	None □ Other:
% Cobble Aquatic Vegatation: none Water Characteristic: Odor:	40 s: □ Sewage	20	□ Chemic	cal 🔟 I	None □ Other: Milky ☑ Other:

Organization: SES, Inc.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the	survey that ma	av support recreational uses)
--	----------------	-------------------------------

	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
	decess location (m)				
	1	1			
Comments: (Please re	ecord any additional comments	here.)			
	none				
	ou have completed all s	sections, checke	ed all applicable	boxes, and that the	form is
Please verify that yo complete. Surveyor's Signature:		sections, checke	ed all applicable _Date of Survey:		form is

Position: field team leader

																Dissolved Oxygen						
	Waterbo	ody ID:	899		•	Site #:	8		•							Date:	10.24.07	,		Time:	13:40	
	Estimate	ed Chann	nel Incisio	on:	4.0	(m) (hei	ight betw	een low b	ank wid	th and wa	ater)					Di	ssolved (Oxvgen:	•	10.1	(mg/L)	
	GPS Lo	cation - I	Easting (UTM X)	, Northin	g (UTM	Y), Hor	izontal Ac	curacy I	Estimate	(EPE / P	DOP / Fo	OM)					- 1-)			(8)	
		UTM X		0452735		1	UTM Y:		433511	1	•	+/-	5.1	(meters)		Di	ssolved (Oxygen:			(% sat)	
	11	UTM X		0452451	Į .	1	UTM Y:		433511	7	•	+/-	3.9	(meters)			c .c	C 1			(0/)	
	Average	Stream	Width:				4	(meters)	L	ength of	Survey S	Segment:		150	(meters)		Specifi	c Cona:			(µS/cm)	
		age Stream Width: 4 (meters) Length of Survey Segment: 150 (meters) determine Length of Reach) (20x average stream width)								(111 1)	Wa	ter Temp	erature:		17.8	(°C)						
													_									
	Field Staff: Larissa Brown and Gilisa Gould																					
Transect Cross-Section																						
	0	1	0	2	03			04		05		06		07			09		10		11	
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Denth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leit Dank		-		-		-															-	
1	0.3	0.05	0.4		0.4	0.05		0.05	0.4						0.5	0.05	0.3	0.10	0.3	0.05		0.15
2	0.6	0.10	0.8	0.15	0.8	0.15	1.0	0.20	0.8	0.15	1.0	0.15	0.6	0.05	1.0	0.10	0.6	0.20	0.6	0.10	0.4	0.30
3	0.9	0.15	1.2	0.15	1.2	0.20	1.5	0.20	1.2	0.15	1.5	0.20	0.9	0.05	1.5	0.05	0.9	0.20	0.9	0.25	0.6	0.30
4	1.2	0.15	1.6	0.15	1.6	0.20	2.0	0.20	1.6	0.20	2.0	0.20	1.2	0.10	2.0	0.05	1.2	0.20	1.2	0.25	0.8	0.25
5	1.5	0.15	2.0	0.15	2.0	0.20	2.5	0.20	2.0	0.20	2.5	0.20	1.5	0.10	2.5	0.01	1.5	0.20	1.5	0.25	1.0	0.25
6	1.8	0.15				0.20		0.15	2.4	0.20				0.05	3.0	0.01	1.8	0.20	1.8			0.15
7	2.1	0.10			2.8	0.15		0.20						0.05	3.5	0.00		0.20	2.1			0.10
/																						
8	2.4	0.05	3.2	0.05	3.2	0.15	4.0	0.15	3.2	0.05	4.0	0.15	2.4	0.05	4.0	0.05	2.4	0.10	2.4	0.10	1.6	0.10
9	2.7	0.05	3.6	0.05	3.6	0.05	4.5	0.10	3.6	0.05	4.5	0.05	2.7	0.01	4.5	0.01	2.7	0.10	2.7	0.10	1.8	0.05
Right Bank	3.0	0.00	4.0	0.00	4.0	0.00	5.0	0.00	4.0	0.00	5.0	0.00	3.0	0.00	5.0	0.00	3.0	0.00	3.0	0.00	2.0	0.00
Feature Type																						
riffle, run, or pool	r pool pool		pool pool		pool		p	pool		ool	po	pool		pool		ffle pool		ol	pool		pool	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

Signed: gilisa gould Date: 11.01.07	
-------------------------------------	--

WBID#	899
Site #	9

Date & Time:	10.24.0	7 14:15		Site Location Description (e.g. road crossing):						
Personnel:	Larissa	Brown and Gilisa G	ould	Three Groves Rd						
Current Weatl	her Cond	ditions: clear		Facility Name: Alma Sewa			e Treatment Lagoon			
Weather cond	litions fo	r the past 10 days:4	.65 inches	Permit Nun	nber:	MO 0048097				
Drought conditions?: No drought ☑ ; Phase I □ ; Phase II □ ; Phase III □ ; Phase IV □ ; Unknown □										
Site Location										
Location Coor	dinates	(Universal Transver	se Mercator Pi	rojection, In	Meters					
Site 01	Easting	(UTM X):	Northing (UTI	M Y):		Horizontal Accuracy: Meter				
		0451113		4333970		4.8				
Site 11	Easting	(UTM X):	Northing (UTI	M Y):		Horizontal Accuracy: Mete				
		0451173		4334197		7.6				
Photos:										
Photo ID#	F	Photo Purpose	Photo ID#:	Photo F	ourpose	Photo ID#:	Photo Purpose			
55	downstream, T1		56	upstream, T1		57	pipe in creek			
Photo ID#	P	hoto Purpose	Photo ID#	Photo Purpose		Photo ID#	Photo Purpose			
58		downstream, T11	59	upstream,	T11					
Photo ID#		Photo Purpose	Photo ID#	Photo F	Purpose Photo ID#		Photo Purpose			
Prioto ID#		noto Fulpose	FIIOIO ID#	FIIOLOF	Triolo ID#		1 Hoto i dipose			
Uses Observ	ed:									
☐ Swimming]	☐ Skin diving	□ SCUBA d	iving	ring □ Tubin		☐ Water Skiing			
☐ Wind surfi			□ Boating	-	☐ Wading		☐ Rafting			
☐ Hunting		☐ Trapping	☐ Fishing		☑ None	of the above	□ Other:			
Describe:										
I										

WBID#	899
Site #	9

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Condition	ions:				
☐ City/County parks	□ playgrounds	☐ MDC conserv	/ation lands □ U	Irban areas	☐ Rural Residential
☐ Campgrounds	☐ State parks	☐ National Fore	ests 🗆 Na	ature trails	☐ Stairs/walkways
☐ Boating accesses	☐ Fence	✓ No tresspass		eep Slopes	☐ Other:
Comments:	.1				<u>I</u>
none					
i					
Evidence of Human l					
□ Roads	☐ Foot path/prints	☐ Dock/platform		amping Sites	☐ Rope swings
☐ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Discha	arge □ Fis	shing Tackle	☐ Livestock waterin
comments/other:					
none					
1					
1					
Substrate:					
% Cobble	% Gravel	% Sand	% Silt	% Mud/C	Clay % Bedroo
	60		20	20	
Aquatic Vegatation:					
1					
none					
1					
Water Characteristics	es:				
Odor:	☐ Sewage	☐ Musky	□ Chemical	☑ N	None ☐ Other:
Color:	□ Clear	□Green	☐ Gray		Milky ☑ Other:
	•	•	-		brown
Bottom Deposit:	☐ Sludge	☐ Solids	☐ Fine sedime		None ☐ Other:
Surface Deposit:	□ Oil	☐ Scum	☐ Foam	✓N	lone ☐ Other:

WBID # 899 Site # 9

Organization: SES, Inc.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during the survey that may support recre	creational uses)
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Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
			•		
Commonts: (Disease re	aard any additional assessments.	hara)			
Comments. (Please re	cord any additional comments l	nere.)			
	none				
Please verify that yo	ou have completed all s	ections, checke	ed all applicable	boxes, and that the	form is
Surveyor's Signature:	gilisa gould		_Date of Survey:	10.24.07	

Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys Data Sheet C - Field Survey Results

																		Disso	lved Ox	ygen		
	Waterbo	ody ID:	899		Ī	Site #:	9		ī							Date:	10.24.07			Time:	14:15	
	Estimate	ed Chanr	nel Incisio	on:	3.0	(m) (hei	ght betw	een low b	ank wid	th and wa	ater)					Di	ssolved (Oxygen:		8.8	(mg/L)	
		cation - l UTM X		UTM X) 0451113			Y), Hor UTM Y:	izontal Ac	curacy I 433397		(EPE / P	DOP / FO	OM) 4.8	(meters)			ssolved ((% sat)	
		UTM X		0453373								+/-	7.6	(meters)	•	Di		•				
	Average	e Stream	Width:				7	(meters)	L	ength of	Survey S	Segment:		150	(meters)		Specifi	c Cond:			(µS/cm)	
	(To dete	ermne Le	ngth of F	Reach)					(2	20x avera	ge strear	n width)				Wa	ter Temp	erature:		23.2	(°C)	
	Fiel	ld Staff:	Larissa	a Brown		and	Gilisa G	ould						-								
										Tra	nsect C	ross-Se	ction									
	0)1	0	2	0	3		04	()5	0	6		07	08	3	09	9	1	0	1	1
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
eft Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.6	0.10	0.7	0.05	0.6	0.05	0.6	0.01	0.7	0.10	0.5	0.01	0.6	0.05	0.5	0.30	0.6	0.15	0.6	0.01	0.7	0.05
2	1.2	0.20	1.4	0.20	1.2	0.10	1.2	0.05	1.4	0.30	1.0	0.05	1.2	0.10	1.0	0.40	1.2	0.35	1.2	0.10	1.4	0.05
3	1.8		2.1	0.20	1.8			0.15			1.5						1.8	0.40	1.8			0.01
4	2.4		2.8					0.20										0.35	2.4			0.05
5	3.0		3.5 4.2	0.25	3.0						3.0						3.0	0.35	3.0		3.5 4.2	0.05
7	4.2				4.2			0.25									4.2	0.40			4.2	
8	4.8		5.6		4.8								4.8			0.10	4.8	0.25	4.8		5.6	0.10
9	5.4		6.3		5.4			0.05					5.4	0.10				0.05	5.4		6.3	0.15
ight Bank	6.0	0.00	7.0	0.00	6.0	0.00	6.0	0.00	7.0	0.00	5.0	0.00	6.0	0.00	5.0	0.00	6.0	0.00	6.0	0.00	7.0	0.00
eature Type		s a 1		1		1		1	_	. a1		. a1		a a 1		a.1		a1		1		a1
ffle, run, or pool	pc	ool	po	IUI	pc	ool	p	ool	po	ool	pc	ool	р	ool	po	UI	po	UI	po	UI	po	UI

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

 $GPS\ locations\ corresponds\ to\ Transect\ 01\ and\ 11.\ Transects\ ordered\ in\ upstream\ to\ downstream\ order.$

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07

WBID#	899
Site #	10

Field Data Sheets For Recreatiuonal Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time:	10.24.07 15:	00	Site Location	on Descrip	tion (e.g. road	crossing):	
Personnel:	Larissa Brown and Gilisa	a Gould		Low Bran	ch Rd.		
Current Weat	ner Conditions: clear		Facility Nar	me:	Alma Sewage	e Treatment Lag	oon
Weather cond	litions for the past 10 days	s:4.65 inches	Permit Nun	nber:	MO0048097		
Drought cond	itions?: No drought ☑ ; P	hase I □ ; Phase	e II □ ; Phas	e III □ ; PI	hase IV □ ; Ur	nknown 🗆	
-							
Site Location	ı .						
Location Cool	dinates (Universal Transv	verse Mercator P	rojection, In	Meters			
Site 01	Easting (UTM X):	Northing (UTI	M Y):		Horizontal Ac	ccuracy:	Meters
	0450274		4331236				9.1
Site 11	Easting (UTM X):	Northing (UTI	M Y):		Horizontal Ac	ccuracy:	Meters
	0450246		4331466			•	9.4
	0430240		4001400				₹.
Photos:	•						
Photo ID#	Photo Purpose	Photo ID#:	Photo F	Purpose	Photo ID#:	Photo Pu	pose
63	downstream, T!	64	upstream,	T1	65	downstream, T1	1
Photo ID#	Photo Purpose	Photo ID#	Photo F	ourpose	Photo ID#	Photo Pu	pose
66	upstream, T11						
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Pu	pose
Uses Observ	ed:						
☐ Swimming	☐ Skin diving	□ SCUBA d	iving	☐ Tubin	g	☐ Water Skiin	g
☐ Wind surfi	ng □ Kayaking	□ Boating		□ Wadir	ng	□ Rafting	
☐ Hunting	☐ Trapping	☐ Fishing		☑ None	of the above	☐ Other:	
Describe:	1						

WBID#	899
Site #	10

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

WBID # 899 Site # 10

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morbinology. (Record isolated pools of other features identified during the survey that may support recreational i	hology: (Record isolated pools or other features identified during the survey that may support recreational uses)
---	--

	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
	()				
omments: (Please re	cord any additional comments	here.)			
ne					
lease verify that yo	ou have completed all s	ections, checke	ed all applicable	boxes, and that the	form is
omplete.	ou have completed all s gilisa gould		ed all applicable _Date of Survey:		form is

Field Data Sheets for Recreational Use Stream Surveys Data Sheet C - Field Survey Results

																		Disso	lved Ox	ygen		
	Waterbo	ody ID:	899		i	Site #:	10		•							Date:	10.24.07	7		Time:	15:00	
	Estimate	ed Chanr	nel Incisi	on:	3.0	(m) (hei	ght betw	een low b	ank wid	th and wa	ater)					,				,		
	GPS Lo	cation - l	Easting (UTM X)	, Northir	ng (UTM	Y), Hor	izontal Ac	curacy I	Estimate ((EPE / P	DOP / FO	OM)				13301704	Oxygen.		10.0	(IIIg/L)	
		UTM X		0450274			UTM Y:		433123		•	+/-	9.1	(meters)	•	Di	ssolved	Oxygen:			(% sat)	
	111	UTM X	:	0450246	5		UTM Y:		433146	6	•	+/-	9.4	(meters)	•		Specifi	c Cond			(uS/cm)	
			Width:				7	(meters)		ength of	-	-		150	(meters)		Бреен	. Cona.			(40/011)	
	(To dete	ermne Le	ength of F	Reach)					(2	20x avera	ge strear	n width)				Wa	ter Temp	erature:		21.1	(°C)	
	Fiel	d Staff:	Larissa	a Brown		and	Gilisa G	ould														
	Transect Cross-Section																					
	01 02 03 04 05						0)6	(07	0	08 09		9	10		11					
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.6	0.01	0.5	0.01	0.5	0.05	0.6	0.05	0.6	0.05	0.6	0.05	0.7	0.05	0.6	0.05	0.7	0.05	0.7	0.01	0.6	0.05
2	1.2	0.01	1.0	0.10	1.0	0.10	1.2	0.10	1.2	0.10	1.2	0.15	1.4	0.05	1.2	0.05	1.4	0.05	1.4	0.10	1.2	0.05
3	1.8	0.01	1.5	0.15	1.5	0.10	1.8	0.10	1.8	0.10	1.8	0.10	2.1	0.10	1.8	0.10	2.1	0.10	2.1	0.10	1.8	0.10
4	2.4	0.05	2.0	0.15	2.0	0.10	2.4	0.30	2.4	0.10	2.4	0.20	2.8	0.15	2.4	0.10	2.8	0.20	2.8	0.10	2.4	0.10
5	3.0	0.01	2.5	0.20	2.5	0.15	3.0	0.25	3.0	0.10	3.0	0.15	3.5	0.15	3.0	0.20	3.5	0.20	3.5	0.10	3.0	0.10
6	3.6	0.01	3.0	0.15	3.0	0.15	3.6	0.30	3.6	0.15	3.6	0.10	4.2	0.15	3.6	0.20	4.2	0.15	4.2	0.15	3.6	0.10
7	4.2	0.00	3.5	0.10	3.5	0.15	4.2	0.20	4.2	0.10	4.2	0.05	4.9	0.10	4.2	0.15	4.9	0.15	4.9	0.20	4.2	0.05
8	4.8	0.01	4.0	0.05	4.0	0.05	4.8	0.20	4.8	0.10	4.8	0.05	5.6	0.10	4.8	0.15	5.6	0.05	5.6	0.25	4.8	0.05
9	5.4	0.01	4.5	0.01	4.5	0.05	5.4	0.05	5.4	0.05	5.4	0.01	6.3	0.05	5.4	0.10	6.3	0.05	6.3	0.15	5.4	0.01
aght Bank	6.0	0.00	5.0	0.00	5.0	0.00	6.0	0.00	6.0	0.00	6.0	0.00	7.0	0.00	6.0	0.00	7.0	0.00	7.0	0.00	6.0	0.00
eature Type																						
iffle, run, or pool	. 001		pc	ool	pc	ool	pool		р	ool	ро	ool	р	ool	po	ool pool		ool	pool pool			ol

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07	Date: 11.02.07	gilisa gould	Signed:
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Field Data Sheets For Recreatiuonal Use Stream Surveys

Data Sheet B-Site Characterization

Date & Time:	10.24.07 15:40)	Site Location Description (e.g. road crossing):						
Personnel:	Larissa Brown and Gilisa (Gould	Hwy 20						
Current Weat	Facility Nar	me:	Alma Sewage	e Treatment Lagoon					
Weather cond	litions for the past 10 days:4	1.65 inches	Permit Nun	nber:	MO 0048097				
Drought cond	itions?: No drought ☑ ; Pha	ıse I □ ; Phase	: II □ ; Phas	e III □ ; Pl	nase IV □ ; Ur	nknown □			
Site Location	1*								
	dinates (Universal Transve	rse Mercator P	rojection, In	Meters					
Site 01	Easting (UTM X):	Northing (UTI	M Y):		Horizontal Ac	ccuracy: Meters			
	0450900		4328768			11.2			
Site 11	Easting (UTM X):	Northing (UTI	M Y):		Horizontal Ac	ccuracy: Meters			
	0450896		4328994		3.6				
	0.00222		10-0111						
Photos:	T	1	1		T	т			
Photo ID#	Photo Purpose	Photo ID#:	Photo F	Purpose	Photo ID#:	Photo Purpose			
67	downstream, T1	68	upstream,	Τ1	69	downstream, T11			
Photo ID#	Photo Purpose	Photo ID#	Photo Purpose		Photo ID#	Photo Purpose			
70	upstream, T11								
Photo ID#	Photo Purpose	Photo ID#	Photo F	Purpose	Photo ID#	Photo Purpose			
Uses Observ	ed:								
☐ Swimming	☐ Skin diving	□ SCUBA d	iving	☐ Tubin	g	☐ Water Skiing			
☐ Wind surfi	ng □ Kayaking	□ Boating		□ Wadir	ng	□ Rafting			
☐ Hunting	☐ Trapping	☐ Fishing		☑ None	of the above	☐ Other:			
Describe:	1 11 0								

WBID#	899
Site #	11

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B- Site Characterization (Continued)

Surrounding Condition	ons:				
☐ City/County parks	□ playgrounds	☐ MDC conservat	ion lands	□ Urban areas	☐ Rural Residential
□ Campgrounds	☐ State parks	□ National Forests	3	□ Nature trails	☐ Stairs/walkways
□ Boating accesses	☐ Fence	☐ No tresspass sign	gn	☐ Steep Slopes	☐ Other:
Comments:					
none					
Evidence of Human l	leo:				
□ Roads	☐ Foot path/prints	☐ Dock/platform		☐ Camping Sites	☐ Rope swings
☐ RV/ATV Tracks	☐ Fire pit/ring	☐ NPDES Dischar	ne en	☐ Fishing Tackle	☐ Livestock watering
comments/other:	I I I I C Pitting	I IVI DEO DISCHAI	gc	L 1 ISTILLY TACKIC	Livestock watering
none					
none					
Outratuates					
Substrate:	0/ 0	0/ 0 1	0/ 0:14	0/ 84:1//	0/ D - d - d
% Cobble	% Gravel	% Sand	% Silt	% Mud/(
10	40		10	40	
Aquatic Vegatation:					
none					
-					
Water Characteristics					
Odor:	□ Sewage	□ Musky	☐ Chemi		None ☐ Other:
Color:	□ Clear	□Green	☐ Gray		Milky ☑ Other:
Bottom Deposit:	□ Sludge	□ Solids	☐ Fine se		None ☐ Other:
Surface Deposit:	□ Oil	☐ Scum	□ Foam	⊿ N	lone ☐ Other:

WBID # 899 Site # 11

Organization: SES, Inc.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet B - Site Characterization (continued)

Additional Stream Morphology: (Record isolated pools or other features identified during	g the survey that may support recreational uses)
---------------------------------	---	--

Channel Feature	Distance from access location (m)	Width (m)	Length (m)	Median Depth (m)	Max Depth (m)
Comments: (Please re	cord any additional comments	here.)			
one					
Please verify that yo complete.	ou have completed all s	ections, checke	ed all applicable	boxes, and that the	form is
Surveyor's Signature:	gilisa gould		_Date of Survey:	10.24.07	

Position: field team leader

Field Data Sheets for Recreational Use Stream Surveys Data Sheet C - Field Survey Results

																		Disso	lved Ox	rygen		
	Waterbo	ody ID:	899			Site #:	11									Date:	10.24.07	7		Time:	15:45	
	Estimate	ed Chann	nel Incisi	on:	3.0	(m) (hei	ght betw	een low b	ank widt	th and wa	iter)					Di	ssolved (Oxygen:		10.1	(mg/L)	
	GPS Location - Easting (UTM X), Northing (UTM Y), Horizontal Accuracy Estimate (EPE / PDOP / FOM) 11 UTM X: 0450900 UTM Y: 4328768 +/- 11.2 (meters) 12 UTM X: 0450896 UTM Y: 4338994 +/- 3.6 (meters)											i	Di	ssolved (Oxygen:	(% sat)						
		UTM X		0450896										(meters)			Specific Cond		:(μS/cn		(µS/cm)	
	Average Stream Width: 6 (meters) Length of Survey Segment: 150 (meters) (20x average stream width)											(meters)	Wa	ter Temp	perature:		13.1	(°C)				
	Field Staff: Larissa Brown and Gilisa Gould																					
										Tra	nsect C	ross-Se	ction									
	01 02 03					04	05		0	06		07		8	09		10		11			
Station	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)
Left Bank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0.3	0.05	0.4	0.10	0.3	0.01	0.5	0.05	0.4	0.05	0.5	0.05	0.3	0.15	0.4	0.10	0.6	0.05	0.6	0.05	0.5	0.01
2	0.6	0.05	0.8	0.20	0.6	0.10	1.0	0.15	0.8	0.05	1.0	0.10	0.6	0.20	0.8	0.10	1.2	0.10	1.2	0.15	1.0	0.10
3	0.9	0.05	1.2	0.15	0.9	0.15	1.5	0.20	1.2	0.05	1.5	0.00	0.9	0.25	1.2	0.10	1.8	0.15	1.8	0.15	1.5	0.15
4	1.2	0.01	1.6	0.25	1.2	0.20	2.0	0.25	1.6	0.01	2.0	0.10	1.2	0.20	1.6	0.20	2.4	0.15	2.4	0.20	2.0	0.20
5	1.5	0.00	2.0	0.20	1.5	0.15	2.5	0.25	2.0	0.01	2.5	0.20	1.5	0.20	2.0	0.25	3.0	0.15	3.0	0.20	2.5	0.15
6	1.8	0.05	2.4	0.15	1.8	0.10	3.0	0.30	2.4	0.01	3.0	0.25	1.8	0.20	2.4	0.15	3.6	0.20	3.6	0.20	3.0	0.15
7	2.1	0.01	2.8	0.10	2.1	0.05	3.5	0.25	2.8	0.05	3.5	0.10	2.1	0.20	2.8	0.15	4.2	0.20	4.2	0.15	3.5	0.15
8	2.4	0.05	3.2	0.10	2.4	0.05	4.0	0.20	3.2	0.00	4.0	0.40	2.4	0.15	3.2	0.10	4.8	0.20	4.8	0.10	4.0	0.15
9	2.7	0.01	3.6	0.05	2.7	0.01	4.5	0.10	3.6	0.01	4.5	0.40	2.7	0.15	3.6	0.05	5.4	0.15	5.4	0.05	4.5	0.05
aight Bank	3.0	0.00	4.0	0.00	3.0	0.00	5.0	0.00	4.0	0.00	5.0	0.00	3.0	0.00	4.0	0.00	6.0	0.00	6.0	0.00	5.0	0.00
eature Type	ء نب	H.		vo1		vo1		0.01	4	ffle		vo1		0.01		o1	40.0	1			o1	
iffle, run, or pool	n, or pool riffle		pc	ool	pc	ool	p	ool	111	HE	pc	pool		ool	po	ol pool		po	UI	po	UI	

Notes: Transects will be measured beginning on left descending bank (0 depth) and finishing on right descending bank (0 depth). This width is the wetted width

GPS locations corresponds to Transect 01 and 11. Transects ordered in upstream to downstream order.

Depth measurements taken at 10 equally spaced locations along transect (determine by dividing wetted width by ten)

Mark dry depth measurements as 0; record actual measurements to 0.01 meter unless depth is too deep to measure (then record as > 1)

All measurements to be taken to the nearest 0.01 meter.

Signed: gilisa gould Date: 11.02.07	
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"Gilisa Gould" <ggould@ses-corp.com> 03/26/2008 05:03 PM To "Anne Peery" <anne.peery@dnr.mo.gov>

CC

bcc

Subject RE: Questions on another UAA

Hello, had to stop studying and come in the office to do some "real" work ©

So, WBID 899: yes, it was at base flow based on seeing the water level below vegetation on the banks. I do not know how I came up with the 4.65" for precipitation, because I just now went through the last 10 days and came up with .48" which is closer to your suggested .50".

The pipe at site#4 is mentioned under photos as #36 "water pipe south side of creek". If we can tell where it's coming from, we mention that, but most of these pipes are coming to the creek below ground and tracing is difficult. There is another pipe mentioned (#57) for this water body, but it's source is unknown as well.

Let me know if this answers everything.

Have a good day!

Gilisa Gould SES, Inc., Merriam, KS 913.307.0046 Ext. 19 800.897.1163 ggould@ses-corp.com

From: Anne Peery [mailto:anne.peery@dnr.mo.gov]

Sent: Wednesday, March 26, 2008 3:47 PM

To: ggould@ses-corp.com

Subject: Questions on another UAA

Hello, Gilisa!

I hope your studies are going well.

Questions about Salt Fork, this time (WBID 899).

Since Data Sheet B states it rained 4.65 inches in the last 10 days, we are wondering if the creek was at baseflow. In checking weather at Whiteman AFB, the rainfall data was 0.5" 10/22/07, and none on the 21st and 20th.

Also, one of the pictures at site #4 shows a pipe discharging a copper colored liquid. It was not referred to in any notes. Does SES have any idea about the origin?

1

Thanks.

Anne Peery

RE: Questions on another UAA - Anne Peery/WPCP/DEQ/MODNR

Total Maximum Daily Load (TMDL) Developer Missouri Department of Natural Resources Water Protection Program 573-526-1426 anne.peery@dnr.mo.gov



Site# 1 Photo ID# 22, Downstream, T1



Site# 1 Photo ID# 24, Downstream, T 11



Site# 1 Photo ID# 23, Upstream, T1



Site# 1 Photo ID# 25, Upstream T 11



Site# 2 Photo ID# 26, Downstream, T1



Site# 2 Photo ID# 28, Downstream, T 11



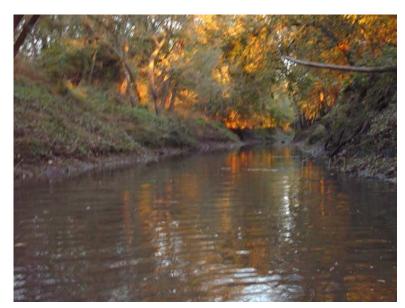
Site# 2 Photo ID# 27, Upstream, T1



Site# 2 Photo ID# 29, Upstream T 11



Site# 3 Photo ID# 31, Downstream, T1



Site# 3 Photo ID# 32, Downstream, T 11



Site# 3 Photo ID# 30, Upstream, T1



Site# 3 Photo ID# 33, Upstream T 11



Site# 4 Photo ID# 34, Downstream, T1



Site# 4 Photo ID# 38, Upstream, T11



Site# 4 Photo ID# 35, Upstream, T1



Site# 4 Photo ID# 37, Downstream, T 11



Site# 4 Photo ID# 36, Pipe on bank of creek



Site# 5 Photo ID# 40, Upstream, T1



Site# 5 Photo ID# 39, Upstream, T1



Site# 5 Photo ID# 41, Downstream, T11



Site# 6 Photo ID# 43, Downstream, T 1



Site# 5 Photo ID# 42, Upstream, T11



Site# 6 Photo ID# 44, Upstream T 1



Site# 6 Photo ID# 45, Downstream, T 11



Site# 7 Photo ID# 47, Downstream, T 1



Site# 6 Photo ID# 46, Upstream, T 11



Site# 7 Photo ID# 48, Upstream T 1



Site# 7 Photo ID# 49, Downstream, T 11



Site# 8 Photo ID# 51, Downstream, T 1



Site# 7 Photo ID# 50, Upstream, T 11



Site# 8 Photo ID# 52, Upstream T 1



Site# 8 Photo ID# 53 Downstream, T 11



Site# 8 Photo ID# 54, Upstream, T 11



Site# 9 Photo ID# 56, Upstream T 1

Site# 9 Photo ID# 55, Downstream, T 1 (no photo)



Site# 9 Photo ID# 58, Downstream, T11



Site# 10 Photo ID# 63, Downstream, T 1



Site# 9 Photo ID# 59, Upstream, T11



Site# 10 Photo ID# 64, Upstream T 1



Site# 10 Photo ID# 65, Downstream, T11



Site# 11 Photo ID# 67, Downstream, T 1



Site# 10 Photo ID# 66, Upstream, T11



Site# 11 Photo ID# 68, Upstream T 1



Site# 11 Photo ID# 69, Downstream, T11



Site# 11 Photo ID# 70, Upstream, T11